

CLAIMS

The embodiments of the invention in which an exclusive property or right is claimed are defined as follows. Having thus described the invention
5 what is claimed is:

1. A latch communications system, comprising:

a communications receiver and transmitter unit associated with a
10 latch;

an interface component for interfacing with said communications receiver and transmitter unit, wherein said interface component is co-located with said communications receiver and transmitter unit in association with
15 said latch;

an interpreter associated with said interface component and said communications and transmitter unit, wherein said interpreter processes information received from said communications receiver and transmitter unit
20 in order to provide latch diagnostics and functionalities.

2. The system of claim 1 wherein said communications receiver and transmitter unit comprises a wireless communications component for wirelessly communicating with a host computer.
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3. The system of claim 2 wherein said wireless communications component includes an antenna and associated wireless communications circuitry for receiving and transmitting data per a desired frequency.

30 4. The system of claim 1 wherein said communications receiver and transmitter unit comprises a direct wire connection for communicating data to and from said interpreter.

5. The system of claim 4 wherein said direct wire connection comprises a voltage level shifter for transforming voltage levels for communication with said interface component.

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6. The system of claim 1 wherein said interface component comprises a Universal Asynchronous Receiver/Transmitter (UART) which can receive and transmit data serially from said communications receiver and transmitter unit and receive and transmit data in parallel with said interpreter.

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7. The system of claim 6 wherein said UART comprises a hardware component separate from said interpreter.

8. The system of claim 6 wherein said UART is integrated with said interpreter.

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9. The system of claim 8 wherein said interpreter comprises a microprocessor that processes data received from said UART.

10. The system of claim 8 wherein said interpreter comprises a logic array that performs a particular function based on particular data received from said UART.

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11. A latch communications system, comprising:

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a communications receiver and transmitter unit associated with a latch;

an interface component for interfacing with said communications receiver and transmitter unit, wherein said interface component is co-located with said communications receiver and transmitter unit in association with said latch;

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an interpreter associated with said interface component and said communications and transmitter unit, wherein said interpreter processes information received from said communications receiver and transmitter unit
5 in order to provide latch diagnostics and functionalities, 8 wherein said interpreter comprises a logic array that performs a particular function based on particular data received from said interface component; and

a wireless communications component for wirelessly communicating
10 data between said communications receiver and transmitter unit and a host computer.

12. The system of claim 11 wherein said interface component comprises a Universal Asynchronous Receiver/Transmitter (UART) which can receive
15 and transmit data serially from said communications receiver and transmitter unit and receive and transmit data in parallel with said interpreter.

13. The system of claim 11 wherein said latch comprises a vehicle door latch.
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14. A latch communications method, comprising the steps of:

associating a communications receiver and transmitter unit with a latch;
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establishing an interface component for interfacing with said communications receiver and transmitter unit, wherein said interface component is co-located with said communications receiver and transmitter unit in association with said latch; and
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associating an interpreter with said interface component and said communications and transmitter unit, wherein said interpreter processes

information received from said communications receiver and transmitter unit in order to provide latch diagnostics and functionalities.

15. The method of claim 14 further comprising the step of configuring said
5 communications receiver and transmitter unit to comprise a wireless communications component for wirelessly communicating with a host computer.

16. The method of claim 15 further comprising the step of configuring said
10 wireless communications component to include an antenna and associated wireless communications circuitry for receiving and transmitting data per a desired frequency.

17. The method of claim 14 wherein further comprising the step of
15 configuring said communications receiver and transmitter unit to comprise a direct wire connection for communicating data to and from said interpreter.

18. The method of claim 17 further comprising the step of configuring said
20 direct wire connection to comprise a voltage level shifter for transforming voltage levels for communication with said interface component.

19. The method of claim 14 further comprising the step of configuring said
interface component to comprise a Universal Asynchronous
Receiver/Transmitter (UART) which can receive and transmit data serially
25 from said communications receiver and transmitter unit and receive and transmit data in parallel with said interpreter.

20. The method of claim 19 further comprising the step of embedding
said interpreter, said UART, and said communications receiver and
30 transmitter unit within said latch, wherein said comprises a vehicle door latch.